
The fish assemblage characterization of the Corumbataí river basin

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Abstract

The Piracicaba river basin has received special attention from local authorities because it has presented a lot of problems about the misutilization of its hydric resources. The Corumbataí river basin, one of the major streams of the right side of the Piracicaba river, is regionally important, not only because it still has good water quality but also because it has unique elements inside the landscape of São Paulo state. This thesis aims to characterize the fish assemblage of the Corumbataí river basin and provide tools to assess the present environmental *status* of the basin. It has been chosen 4 major streams with 3 unit samples in each one of the streams. The samples were carried out from March to June and from September to December in the year of 2001, making up a total of 24 samples. The biotic data were assessed using diversity measurement. An ANCOVA was used to test the hypothesis of time-space variation of the fish assemblage, where the dependent variable was the species richness; the factor was the stream order and 2 environmental co-variables were used: temperature and number of individuals, thus revealing both time-space variation and some patterns which are recognized academically: species-area relationship and river continuum concept (RCC). Multivariate techniques were used to determine the correlation between richness and the landscape characteristics in the sampling unit, revealing that there is a greater number of species along the sites with a larger riparian zone. Some fish species have showed to be a good indicator: *Hypostomus strigaticeps*, *Hoplosternum littorale* and *Salminus hilarii*; on the other hand *Astyanax altiparanae* has not showed to be a good indicator species.

Key-words: Corumbataí river; fish assemblage; species diversity; indicator species

FICHA CATALOGRÁFICA
PREPARADA PELA SEÇÃO DE TRATAMENTO
DA INFORMAÇÃO DO SERVIÇO DE
BIBLIOTECA – EESC/USP

Cetra, Mauricio

Caracterização das assembléias de peixes da Bacia do Rio Corumbataí (SP) / Mauricio Cetra. – São Carlos, 2003.

C423c

Tese (Doutorado) – Escola de Engenharia de São Carlos-Universidade de São Paulo, 2003.

Área: Ciências da Engenharia Ambiental.

Orientador: Prof. Dr. Miguel Petrere Júnior

1. Rio Corumbataí. 2. Assembléia de peixes. 3. Diversidade de espécies. 4. Bioindicadores. I. Título.